

553, 940

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
26 August 2004 (26.08.2004)

PCT

(10) International Publication Number
WO 2004/071276 A2

(51) International Patent Classification⁷:

A61B

(74) Agents: SAMPLES, Kenneth, H. et al.; Fitch, Even, Tabin & Flannery, 120 South LaSalle Street, Suite 1600, Chicago, IL 60603 (US).

(21) International Application Number:

PCT/US2004/003205

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date: 5 February 2004 (05.02.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

60/445,005

5 February 2003 (05.02.2003)

US

(71) Applicant (for all designated States except US): **PIO-NEER LABORATORIES, INC.** [US/US]; 375 River Park Circle, Marquette, MI 49855 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **SONGER, Matthew, N.** [US/US]; 2645 West Grove Street, Marquette, MI 49855 (US). **YUAN, Hansen** [US/US]; 550 Harrison Center, #128, Syracuse, NY 13202 (US). **KILPELA, Thomas, S.** [US/US]; 1600 County Road 492, Marquette, MI 49855 (US). **JANOWSKI, Brian, P.** [US/US]; 971 Highland Drive, Marquette, MI 49855 (US). **BERREVOETS, Greg, A.** [US/US]; 143 Heidtman Road, Skandia, MI 49885 (US).

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: BONE PLATE SYSTEM

(57) Abstract: Bone plate and bone screw lock systems are provided for use in surgical implants. In a preferred form, the bone plate or other implantable member defines a bore for receiving a bone screw and a recess in communication with the bore. A screw lock operates in the bore at the recess to engage and lock the bone screw against unintentional movement. The preferred screw lock is shifted about the screw between an unlocked position to allow manipulation of the screw and a locked position in which the screw lock grips the head of the screw to prevent movement of the screw. The screw lock preferably has a c-shaped collar configuration with opposing ends and a camming engagement with the plate or other member in the recess. Upon rotation of the screw lock, the camming engagement causes the ends of the collar to either shift toward one another in which the collar compresses about the screw to lock the screw or away from another to unlock the screw head.

WO 2004/071276 A2